INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

PURPOSE OF THE TABLE: • To provide information useful for data evaluation of chemicals and radionuclides detected • To provide adequate information so the user/reviewer gets a sense of the chemicals and radionuclides detected at the site and the potential magnitude of the potential problems at the site • To provide chemical screening data and rationale for selection of COPCs.	
INFORMATION DOCUMENTED: • Statistical information about chemicals and radionuclides detected in each Medium • The detection limits of chemicals and radionuclides analyzed • The screening toxicity values for COPC selection • The chemicals and radionuclides selected or deleted as COPCs.	
TABLE NUMBERING AND SUMMARY BOX INSTRUCTIONS: • Complete one copy of Table 2 for each unique combination of the following three fields that will be quantitatively evaluated in the risk assessment: Scenario Timeframe, Medium, and Exposure Medium. • Enter each combination of these three fields in the Summary Box in the upper left corner of the table. • Number each table uniquely, beginning with 2.1 and ending with 2.n, where "n" represents the total number of combinations of the three key fields.	***It is possible that some Planning Tables may contain the same data associated with different descriptions in the Summary Box in the upper left corner.*** ***Separate tables may be necessary to ensure transparency in data presentation for each Exposure Pathway. Replication of information is readily accomplished using spreadsheet software.*** ***Consult the EPA risk assessor for alternatives (e.g., footnotes) to preparing multiple tables with the same data.***
HOW TO COMPLETE/INTERPRET THE TABLE	
SUMMARY BOX IN UPPER LEFT CORNER	
Row 1 - Scenario Timeframe	
Definition: • The time period (current and/or future) being considered for the exposure pathway.	
Instructions: • Choose from the picklist to the right.	***Current*** ***Future*** ***Current/Future*** ***Not Documented***

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Row 2 - Medium	
Definition: • The substance (e.g., air, water, soil) that is a potential source of contaminants in the Exposure Medium. (The Medium will sometimes = the Exposure Medium.) Usually, the Medium is that targeted for possible remediation.	
Instructions: • Choose from the picklist to the right.	***Groundwater*** ***Leachate*** ***Sediment*** ***Sludge*** ***Soil*** ***Surface Water*** ***Debris*** ***Liquid Waste*** ***Solid Waste*** ***Air*** ***Surface Soil*** ***Subsurface Soil*** ***Other***
Row 3 - Exposure Medium	
Definition: • The contaminated environmental medium to which an individual may be exposed. Includes the transfer of contaminants from one medium to another. ***For example:*** ***1) Contaminants in Groundwater (the Medium) remain in Groundwater (the Exposure Medium) and are available for exposure to receptors.*** ***2) Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and are available for exposure to receptors.*** ***3) Contaminants in Sediment (the Medium) may be transferred to Fish Tissue (the Exposure Medium) and are available for exposure to receptors.***	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Instructions: • Choose from the picklist to the right.	***Groundwater*** ***Leachate*** ***Sediment*** ***Sludge*** ***Soil*** ***Surface Water*** ***Debris*** ***Liquid Waste*** ***Solid Waste*** ***Air*** ***Plant Tissue*** ***Animal Tissue*** ***Fish Tissue*** ***Spring Water*** ***Surface Soil*** ***Subsurface Soil*** ***Particulates*** ***Vapors*** ***Other***
BODY OF THE TABLE	
Column 1 - Exposure Point	
Definition: • An exact location of potential contact between a person and a chemical or radionuclide within an exposure medium. ***For example:*** ***1) Contaminants are in Groundwater (the Medium and the Exposure Medium) and exposure to Aquifer 1 - Tap Water (the Exposure Point) is evaluated.*** ***2) Contaminants in Groundwater (the Medium) may be transferred to Air (the Exposure Medium) and exposure to Aquifer 1 - Water Vapors at Showerhead (the Exposure Point) is evaluated.*** ***3) Contaminants in Sediment (the Medium) may be transferred to Fish Tissue (the Exposure Medium) and Trout from Dean's Creek (the Exposure Point) is evaluated.***	
Instructions: • Provide the information as text in the table.	***Exposure Points should be defined the same way as was done in Planning Table 1.***
Column 2 - CAS Number	
Definition: • The Chemical Abstract Registry Number, a unique standardized number which is assigned to chemicals and radionuclides.	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Instructions: • Provide the CAS Number for each chemical detected in the samples for the Medium. ***Note: If the CAS number is not available, be sure to enter the Chemical Name in Column 3 and consult the EPA risk assessor.***	***Include dashes in the CAS number. CAS numbers can be arranged in the order that the risk assessor prefers.***
Column 3 - Chemical	
Definition: • The name of the compound detected in samples for the Medium.	
Instructions: • Provide the names of the chemicals which were detected in the sample for the Medium.	***Chemicals can be grouped in the order that the risk assessor prefers. Class descriptions (e.g., PAHs, VOCs, inorganics) can be included as a row before a group of chemicals.***
Column 4 - Minimum Concentration (Qualifier)	
Definition: • Minimum Concentration - The lowest detected concentration of the chemical or radionuclide in the medium. • Qualifier - The alpha-numeric code assigned to the concentration value by the analytical chemist during data validation for the Minimum Concentration value.	
Instructions: • Enter the minimum detected concentration for the medium. If there is a detected minimum, enter that as the Minimum Concentration. If the concentration is not detected, enter 'ND' as the Minimum and Maximum Concentrations and record the detection limits in the Range of Detection Limits column. • Enter the qualifier associated with the minimum concentration for each chemical or radionuclide in parentheses () after the Minimum Concentration value. Multiple qualifiers should be separated by commas. • Provide the definition of each qualifier in the table footnotes.	
Column 5 - Maximum Concentration (Qualifier)	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Definition: • Maximum Concentration - The highest detected concentration of the chemical or radionuclide in the Medium at the current Exposure Point which is above the sample quantitation limit. • Qualifier - The alpha-numeric code assigned to the concentration value by the analytical chemist during data validation for the Maximum Concentration value.	
Instructions: • Enter the maximum detected concentration for the medium. • Enter the qualifier associated with the Maximum Concentration for each chemical or radionuclide. • Provide the definition of each qualifier in the table footnotes.	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Column 6 - Units	
Definition: • The concentration units for each chemical or radionuclide detected.	
Instructions: • Enter the concentration units for each chemical or radionuclide. Units may vary among matrices/media.	***Consult with the EPA risk assessor to determine if there is a preference regarding the units used for different matrices (e.g., mg/kg for soil, µg/L for groundwater). Choices include:*** ***mg/l µg/l ng/l*** ***pg/l % ppm*** ***ppb ppt g/kg*** ***mg/kg µg/kg ng/kg*** ***µg/g mg/m³ µg/m³*** ***fibers/l fibers/m³ fibers/kg*** ***lbs/day µg/100cm² mg/cm²*** ***µRem/hr Rem/yr pCi/g*** ***pCi/kg pCi/m³ pCi/l*** ***pCi/m²/sec Other*** ***Not Documented***
Column 7 - Location of Maximum Concentration	
Definition: • The sample number that identifies the location where the highest concentration sample was taken.	
Instructions: • Enter the sample identifier which corresponds to the location where the sample was taken.	
Column 8 - Detection Frequency	
Definition: • The number of times the chemical or radionuclide was detected versus the number of times it was analyzed, expressed as the "fraction" X/Y.	***For example, 5/9 indicates that a chemical was detected in 5 out of 9 samples.***
Instructions: • Indicate the number of times the chemical or radionuclide was detected versus the number of times it was analyzed as the "fraction" X/Y.	***Consult the EPA risk assessor for an explanation of how Detection Frequency should be interpreted and applied.***
Column 9 - Range of Detection Limits	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Definition: • The lowest and highest detection limits.	***Consult the EPA risk assessor for definitions of detection limits.***
Instructions: • Enter the lowest and highest detection limit for the chemical or radionuclide in the medium separated by a dash (-). Consult with the EPA risk assessor if detection limits are not reported	
Column 10 - Concentration Used for Screening	
Definition: • The detected concentration which was used to compare to the screening value.	
Instructions: • Enter a concentration for each chemical being evaluated for the Medium. • Use a footnote to specify the source(s) of the Concentration Used for Screening.	***Consult the EPA risk assessor when determining this value. For example, maximum or average.***
Column 11 - Background Value	
Definition: • The background value for the chemical or radionuclide in that Medium as defined by guidance. ***If a "t-test" or other test which requires backup information is required, this supporting information is should be provided separately.***	
Instructions: • Enter the numerical value in the column. • Specify the source(s)/derivation of the Background Value in table footnotes. For example, literature value, data from a nearby site, statistical tool.	***Consult the EPA risk assessor for how background values are determined and whether and how background values are considered for COPC screening.***
Column 12 - Screening Toxicity Value (N/C)	
Definition: • The screening level used to compare detected concentrations of chemicals and radionuclides. Screening Toxicity Values are usually risk-based media concentrations (e.g., RBCs, SSLs, PRGs).	

INSTRUCTIONS FOR TABLE 2

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN (continued)

Instructions: • Enter the Screening Toxicity Value. • Also indicate, with (N) or (C) whether the value is based on non-cancer or cancer effects, respectively. • To enter both the cancer and non-cancer screening toxicity values, either (1) record both in the same cell separated by a "/" (e.g., 15C/3.8N), or record one value in Column 12 and one in Column 13. • Use a footnote to provide a reference/explanation for the source of the screening values used.	***Consult the EPA risk assessor for the source of the screening value and for guidance on comparing the screening value to detected concentrations.***
Column 13 - Potential ARAR/TBC Value	
Definition: • Potential applicable or relevant and appropriate requirements (ARAR) and to be considered (TBC) values.	***For example, MCL values, soil cleanup level values, or other values to be considered.***
Instructions: • If multiple values exist, then enter the most conservative ARAR or TBC value.	***Consult the EPA risk assessor regarding the requirements for this column.***
Column 14 - Potential ARAR/TBC Source	
Definition: • The type or source of the ARAR/TBC value entered into the previous column.	***For example, MCL or SMCL.***
Instructions: • Enter the type or source of ARAR/TBC value which corresponds to the value in the previous column.	
Column 15 - COPC Flag (Y/N)	
Definition: • A code which identifies whether the chemical or radionuclide has been selected as a chemical of potential concern.	
Instructions: • Enter "Y" or "N" to indicate whether the chemical has been retained as a COPC.	***Y*** ***N***

Column 16 - Rationale for Selection or Deletion	
Definition: • The reason that the chemical or radionuclide was selected or not selected for quantitative or qualitative analysis.	***Consult the EPA risk assessor for the rationale codes.***
Instructions: • Enter the rationale codes for selection/deletion of chemicals of potential concern. Separate multiple codes with commas. • Define the codes for the "Rationale for Selection or Deletion" column in a footnote on this table.	***The example data table provides rationale codes for example purposes only.***